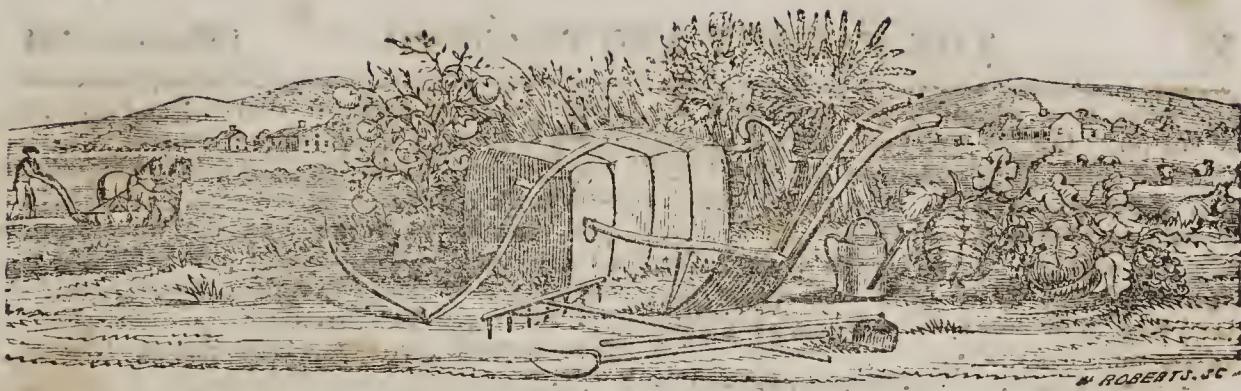


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W. ROBERTS, SC.

FARMER AND PLANTER.

DEVOTED TO AGRICULTURE, HORTICULTURE, DOMESTIC AND RURAL ECONOMY,

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For the Farmer and Planter.
Guano and Kettlewell's Salts.

MESSRS. EDITORS:—These fertilizers are commanding the attention of farmers at this time, and the question is frequently asked, will they pay? The experiments made in various parts of this State, Georgia, and Alabama, are decidedly in their favor. Mr. Lacoste, Dantzler, Kinard, and others in this State, have all made experiments with guano and gypsum, and the results are favorable. Kettlewell's salts are highly recommended by Messrs. Chisholm and Rheit, of this State, and Mr. Mayson of Alabama, all of whom bear ample testimony of its effects on various crops. Wylie Mayson of Auburn, Alabama, reports in the January No., 1854, of the Soil of the South, two experiments made the past year, on one acre of corn on which 350 lbs. of guano and salts were sown broad-cast; he gathered 24 bushels of corn, and on five acres similar and he only gathered 36 bushels of nubbins. Now here was 16 bushels corn made on poor land by the application of the guano and salts; over and above the production of one acre of similar land.

The experiment on one acre of land planted in cotton, was conducted with a great deal of care, and every thing noted.—The acre was divided into four equal parts. On the first quarter he sowed 18 lbs. of salts and guano combined, and 25 lbs. of gypsum, from which he gathered 253 lbs. of cotton. On No. 2, he put 50 lbs. of guano

and salts, from which he gathered 240 lbs. of cotton. On No. 3, he put 62 lbs. of guano and salts, from which he gathered 250 lbs. of cotton. On No. 4, he put 75 lbs. of guano, and salts, from which he gathered 278 lbs. making a total for the acre of 1,021 lbs. of cotton. The land was poor pine land and had been in cultivation twelve years and badly worn.

In these figures it will be discovered that 100 lbs of gypsum and 75 lbs. of guano and salts, which is worth in Charleston \$2 10, made 1,012 lbs of cotton on an acre of poor pine land, which we will assume would not have made more than 500 lbs., this will leave 512 lbs. to the credit of the guano and salts, which we will estimate to be worth \$12 50, and deduct \$3 50 for freight and costs; which is too high, you have \$9 net profit from one acre of poor land. Plat No. 4, made 278 lbs. which is at the rates of 1,112 lbs. per acre. The 300 lbs of guano and salts is worth in Charleston, \$6.00—say delivered at Greenwood, \$7.00, which deducted from the amount of 600 lbs of cotton at 2½ cents per lb., and you have 8 dollars as the net gain from one acre, after paying all expenses.—The calculations above are not strictly correct but enough so for all practical purposes. Now, Mr. Editor, what does these figures prove? if they prove any thing, they certainly prove that \$3 50 expended in guano and salts, and gypsum, make a clear profit of nine dollars from one acre of poor land, and that \$7 00 worth of guano and salts give a profit of \$8 00 from one acre of land. Now, Mr. Editor, the question naturally arises, *and it is the true question*, what quantity will produce the greatest amount of profit?—This question is very important to decide at this time, and we are all at a loss to know what quantity to apply to the acre of any of the concentrated manures. Mr. Mayson's experiment has been conducted with great care and precision, and I am persuaded that guano and salts, combined with gypsum, at the rates of 200 lbs. per acre is sufficient, and perhaps will pay best, as I have great confidence in gypsum for cotton. Another important point in the calculation is, to find out what quantity of these fertilizers will feed the plant and mature it, so it will give a remunerating crop; all over and above that point may not be most profitable, though it is left in the land.

I have bought five tons of guano and five tons of gypsum, and have also ordered six

tons of salts and guano, which I intend to apply to cotton the present year.

I have written these crude notions hastily, will you examine them and shape them in such manner as to make them more comprehensible. I am yours, &c.,

THOMAS B. BYRD.

How to make One Farm Equal to Three.

"One farm equal to three!" said Mr. Shallowfield; "never heard of such a thing; besides, I don't believe it."

Of course, Mr. Shallowfield, we don't at all wonder at your scepticism; there are too many agriculturists of the same stamp. But did you never hear of a building of one story being converted into three, four, five, six? Mr. S. says that is a totally different affair. No, it ain't, either, Mr. S.; the cases are exactly parallel. If there is any difference at all, it is a secret worth knowing. Listen, and we will tell you. (Here Mr. Shallowfield waved his hand quite skeptically.)

G. T. Stewart, Esq., says the Ohio Farmer, in his recent address before the Ohio Agricultural Society, thus speaks on this important subject:

"Many farmers, who are destroying the productiveness of their farms by shallow work, as they find that their crops are diminished, think only of extending their acre by adding acres of surface, as if they supposed that their title-deeds only give them a right to six inches deep of earth! If they will take these deeds, study their meaning, and apply the lesson to their fields, they will soon realize, in threefold crops, the fact that the law has given three farms where they supposed they had but one; in other words, that the sub-soil, brought up and combined with the top soil, and enriched with the atmospheric influences and those other elements which agricultural science will teach them to apply to their ground, will increase threefold the measure of their productiveness."

"To show to what extent the fertility of the soil can be increased, I refer to a statement in the last Patent Office report.

"In the year 1850 there were nine competitors for the premium corn crop of Kentucky, each of whom cultivated ten acres. Their average crop was about 122 bushels per acre. At this time the average crop of wheat per acre in harvests in Great Britain, on a soil cultivated for centuries, is about

double that produce on the virgin soil of Ohio. Why is this? Simply because the British farmers are educated men, and apply work wisely; they pay back to the earth what they borrowed from her; they endeavor by every means in their power to enrich their ground, and in return it enriches them. If our farmers instead of laboring to double their acres, would endeavor to double their crops, they would find it a saving of time and toil, and an increase of profits.

"Many of them never think of digging ten inches into the soil unless they have dreamed about a crock of gold hid in the earth; but if they would set about the work of digging in earnest, every man would find his crock of gold without the aid of dreams and devination.

"We have a great advantage over the British farmers in the fact that our farmers nearly all hold the lands which they cultivate in fee-simple while in England they are chiefly tenants, hiring the lands of the nobility, paying enormous rents to the proprietors, besides heavy taxes to the Government. Taxes here are comparatively light, and our farmers here are their own landlords. Hence they have been able to pay three-fold wages for labor to those in Europe, pay the cost of transportation, and yet undersell the British farmers in their own market."

The summary of the above is just this: plough a little deeper; pay back to Mother Earth what you borrow from her—which is no more than just—and by all means acquire knowledge. The British farmers are said to be "educated men;" if they were not, they could not possibly raise on land cultivated for centuries "double the crops produced on our virgin soil," and that in the teeth of "enormous rents and heavy taxes." It is knowledge, then, that is the great cultivator, after all; with dolting ignorance and stolid indifference we can do nothing; and we hope to see ere long an agricultural professorship established in every college throughout the length and breadth of our land."

Why, indeed, should the American farmer be behind the "educated" anywhere? He has generally speaking, neither high rents nor taxes to impede his progress, and shall he allow himself to be outdone by those who are thus shackled? There is a "crock of gold" under every man's farm, and if

every agriculturist would only think so, we have no doubt he would go a little deeper than "ten inches," and assuredly he would find it. Our great Franklin recommended that very thing upwards of a century ago—

"Plough deep while sluggards sleep,
And you shall have corn to sell and to keep."

We shall revert to this really important subject another time. We consider it far before the political bickerings and other such nonsense which too much distract the attention of our countrymen.

[*Nauoo Tribune.*

Drying Potatoes for Seed.

A. N. C. Bollman, Counsellor of State and Professor of the Russian Agricultural Institution at Gorigoretsky, says that thoroughly dried potatoes will always produce a crop free from disease." In an interesting pamphlet, it is asserted as an unquestionable fact, that mere drying, if conducted at a sufficiently high temperature, and continued long enough, is a complete antidote to the malady.

The account given by Professor Bollman of the accident which led to this discovery is as follows: He had contrived a potato-setter, which had the bad quality of destroying any sprouts that might be on the sets, and even of tearing away the rind. To harden the potatoes, so as to protect them against this accident, he resolved to dry them. In the spring of 1850, he placed a lot in a very hot room, and at the end of three weeks they were dry enough to plant. The potatoes came up well and, and produced as good a crop as that of the neighboring farmers, with this difference only, that they had no disease, and the crop was therefore, upon the whole, more abundant. Professor Bollman tells us that he regarded this as a mere accident; he, however, again dried his seed potatoes in 1851, and again his crop was abundant and free from disease, while everywhere on the surrounding land they were much affected. This was too remarkable a circumstance not to excite attention, and in 1852 a third trial took place. All Mr. Bollman's own stock of potatoes being exhausted, he was obliged to purchase his seed, which bore unmistakeable marks of having formed part of a crop that had been severely diseased; some in fact, were quite rotten. After keeping them for about a month in a hot room, as before, he cut the largest potatoes into quarters, and the small-

ler into halves, and left them to dry for another week. Accidentally the drying was carried so far that apprehensions were entertained of a very bad crop, if any. Contrary to expectation, however, the sets pushed promptly, and grew so fast that excellent young potatoes were dug three weeks earlier than usual. Eventually nine times the quantity planted was produced, and, although the neighboring fields were attacked, no trace of disease could be found on either the herbage or the potatoes themselves.

This singular result, obtained in three successive years, led to inquiry as to whether any similar cases were on record. In the course of the investigation two other facts were elicited. It was discovered that Mr. Losovsky (living in the government of Witebsk, in the district of Sebege,) had for four years adopted the plan of drying his seed potatoes, and that during that time there had been no disease in his estate. It was again an accident which led to the practice of this gentleman. Five years ago, while his potatoes were digging, he put one in his pocket, and on returning home threw it on his stove (*poele*,) where it remained forgotten till the spring. Having then chanced to observe it, he had the curiosity to plant it, all dried up as it was, and obtained an abundant healthy crop; since that time the practice of drying has been continued, and always with great success. Professor Bollman remarks that it is usual in Russia, in many places, to smoke-dry flax, wheat and rye; and in the west of Russia, experienced proprietors prefer for seed onions that have been kept over the winter in cottages without a chimney; such onions are called *dymka*, which may be interpreted smoke-dried.

The second fact is this: Mr. Wasileffsky, a gentleman residing in the government of Mohileff, is in the habit of keeping potatoes all the year round by storing them in the place where his hams are smoked. It happened that in the spring of 1852 his seed potatoes, kept in the usual manner, were insufficient, and he made up the requisite quantity with some of those which had been for a month in the smoking place. These potatoes produced a capital crop, very little diseased while, at the same time the crop from the sets which were not smoke-dried was extensively attacked by disease. Professor Bollman is of the opinion that there would have been no disease at all, if the sets had better dried.

The temperature required to produce the desired result is not very clearly made out. Mr. Bollman's room in which his first potatoes were dried was heated to about 72°, and much higher. By way of experiment he placed others in the chamber of the stove itself, where the thermometer stood at 136°, and more. He also ascertained that the vitality of the potato is not affected, even if the rind is charred.

In connection with this subject, we would remark that we have several articles of general interest, translated expressly for the *Genesee Farmer*, from the *Journal of the Royal Agronomical Society of St. Petersburg*, which we receive through the kindness of the Russian Minister, M. Bodisco, at Washington. Our arrangements are complete for obtaining every thing of value to our readers in agriculture and horticulture that transpires in Prussia, Austria, Italy, France, and Great Britain.

What is the Value of Distillery Slops? In the December number of the *Farmer*, an esteemed correspondent, "S. W." of Waterloo, in this State, made the following remarks:

It is susceptible of proof that the cooked slop of the distillery will fatten as many animals as the raw corn would have done before it was ground and passed through the still; and if the manure is saved and applied to the soil, nothing is lost—and I trust it will be admitted that the alcohol converted into a burning fluid, and for medicinal purposes, is something gained.

For many chemical and manufacturing purposes, as well as for medical uses and burning, alcohol is a valuable article of commerce. All our water-proof hats (which are water-proof) are made so by first dissolving gum shellac in alcohol, and then working the gum (which is insoluble in water) into the substance of hat bodies. When we wish to determine the quantity of sugar in any given amount of milk, it is first evaporated, then treated with hot sulphuric ether to dissolve and take up the butter, when alcohol will dissolve and remove the sugar of milk, leaving the curd or cheese pure. But our object is not to enumerate the economical uses of alcohol, whether in the arts or sciences, or to discuss the chemistry of whiskey-making, although it is mainly an agricultural question, but simply to inquire into the value of distillery slops for the pro-

duction of pork and beef.

If "cooked" slop will fatten as many animals as the raw corn would have done before it was ground and passed through the still," as many distillers as well as our friend "S. W." think it will, how does it happen that where corn is worth fifty cents a bushel to feed to hogs, no one will pay over ten cents a bushel for the corn used to form "the cooked slop" of a distillery? We have seen not a little of this kind of feed for stock bought and sold; and the writer was, he believes, the first in Western New York to point out a process by which the essential oil that imparts to whisky its peculiar odor and flavor may be wholly removed, so that the pure spirit might be added to brandy, rum or gin, without impairing sensibly the peculiar flavor or strength of either, and at a time when these imported liquors were very expensive so far from seaports. We have seen good whiskey sold in Western New York at twelve cents a gallon. When fourteen quarts of good whiskey are extracted from fifty-six pounds of meal, what does our friend "S. W." suppose the grain has lost in the operation? Not a particle of alcohol existed, as such, in the meal. Fermentation is decomposition quite as much as combustion. In the common process of making raised bread, five per cent, of the flour is entirely consumed in forming the gas called carbonic acid, and alcohol. In making beer for distillation, fermentation is carried much further than in the manufacture of bread. Nearly all of the starch and sugar (*glucose*) in the grain is decomposed to generate so much spirit and gas; and were it not for the oil in corn, which may be seen floating on beer in still-tubs, and remains in the slop, as well as most of the protein compounds in the seed, no refuse from the still would be worth *one-fifth* the value of the grain for the production of meat. When corn is worth thirty cents for making beef and pork, the slop from such corn is worth about six cents to the bushel for a similar purpose.

Why does corn meal, whether cooked or raw, produce comparatively solid lard and pork, while the still-slop from the same meal yields very oily lard and pork? The fact alluded to is of some importance in the chemistry of nutrition—in animal and vegetable physiology. Seeds and plants that contain much starch and sugar, and comparatively little oil, produce solid fat, so called; while seeds (including all forest nuts eaten by

swine, and called "maist") and plants rich oil, yield soft and oily fat, tallow and butter.—Add to still-slops as much starch as fermentation and distillation remove from the grain from which the slop is derived, and it will make the same kind of pork that whole corn does. If hard dry corn makes harder pork than boiled corn, or than cooked meal (as it may), the reason is the defective digestion of dry corn, so that its oil is not converted into an emulsion, or soap, and goes not through the walls of the digestive organs, like oil converted into soap and the soap dissolved in water, to form a part of the blood, but passes on out of the system. A pound of starch is much easier of digestion than a pound of oil, especially if the starch be cooked, as in boiled potatoes. To cook oil in potatoes avails nothing; for oil can neither be boiled nor baked into solubility in water. If our Agricultural Societies were a little more enlightened, they would investigate the economical value of slops, distilled and undistilled, and of all the organized elements in seeds, roots, tubers, apples, and other fruits—of grasses, clovers, peas, and other legumes—so that the best proportions of starch, sugar, oil, and protein compounds for feeding, would be known to every farmer. We have waited patiently thirty years to see the time come when the sciences of digestion, nutrition, fermentation, and manure-making, would receive that public attention which their importance demands.

Probably one or two hundred million bushels of corn have been fed to fattening animals in the United States in the last six months; and we have no doubt that full twenty-five per cent, of the nutritive substances in this grain have passed out of the bowels with the dung when these substances ought to have been digested, and passed directly into the blood vessels to form flesh and fat in the vital economy. In the last four years we have sent out about forty thousand circular letters from the Patent Office, which have gone into every county and parish in the nation; and in every letter there was an inquiry designed to ascertain if possible, from practical farmers, what is the relation that subsists between the daily food of live stock and their growth, or gain in meat, and live weight. All the facts elicited were not so valuable as might be obtained by the judicious expenditure of \$100. Suppose a distiller grinds, ferments and distills

1000 pounds of corn, and then dries all the slop which the corn produces, what will the latter weigh? Can any man in the United States answer this simple question correctly? We doubt it; because the line of research has been after more alcohol—the "fire water"—not after the elements required to produce good milk, butter, cheese, fat and lean meat. Although a friend to temperance we have no prejudices against alcohol. In kitchen slops, and in beer formed from grain, alcohol doubtless aids in the fattening of pigs fed on such food, it being burnt like starch and sugar from which it is formed, to keep their bodies warm. Alcohol can not form fat or muscle, but it can be burnt in the system. Before vegetable substances form vinegar, they always go through with what is termed the vinous fermentation—that is they form alcohol—and it is an enquiry of some moment whether a mash is better for cattle and swine without fermentation, with the vineus, or with the acetous changes having taken place in the bruised grain, leaving the spirit in the one case, or the vinegar in the other, in the slop? Some will say that alcohol is an injury—others that it is a benefit; and similar opinion prevail in reference to the value of slops. Why sour milk and sour feed are sometimes better than sweet milk and unfermented grain, we will endeavor to explain hereafter

Predictions of Weather.

From time immemorial, individuals and nations have had their prognostics of the weather. Cold and heat, storms of wind and showers of rain have been predicted with more or less certainty. The aspects of the planets, and the actions of animals, have been closely watched. Even the growth of plants and the bowels of butchered animals have been thought to augur peculiar seasons. The fall before a hard winter corn husks are said to be much heavier; and the beaver builds his hut one story higher before the approach of extraordinary freshets.—Of course many of these "signs of the times" are entire humbugs, whilst others again are more or less truthful. One thing I would presume to recommend, that we look into the various theories advanced before we sneeringly cast them aside, as it often happens that very "jewels of truth" lie covered up in unseemly, if not even repulsive rubbish.

As a matter of further observation, I would give the statements of O. S. Fowler,

the celebrated phrenologist, respecting the equinoctial storms. Says Mr. F. "The weather, like everything else, is governed by fixed laws which are within human cognizance. The equinoctial storm is a correct type of all the storms of the next six months. As it clears off will they also clear. Abundant rain then insures a wet season and the reverse. This storm in September, 1841, was remarkably warm, and so were all the storms for six months, and the winter was open." That of September, 1844, was very windy, without much rain, a perfect prelude to those sweeping North-west winds that prevailed all winter and spring. That of the March following was so light that I failed to observe it, though on the watch for my weather-gauge for the season, and the exceedingly dry, hot summer following, formed a perfect correspondent. ** A similar principle doubtless governs seasons, probably ergs. These weather-signs are instances, not for their own sake, so much as to show that such signs exist, and to encourage the study of this department of nature."

Prompted by Mr. Fowler's remarks, I have made a few observations. In the spring of 1851, (in Macon Co., Ill.) March was rather windy, and at the time of the equinox we had continued and heavy rains, this being the decided character of the storm.—During the following season there was little rain during April and until the tenth of May, when one of the wettest seasons set in which I presume will not soon be forgotten.—Streams were high all summer, and the roads were not good till September. I did not note the autumnal equinox of the same year. In March 1852, a storm commenced a few days before the occurrence of the equinox, with warm rain, which continued for some twelve hours. This was followed by sleet as the temperature of the atmosphere rapidly declined. The clouds began slowly to clear away, and unusually cold North-West winds prevailed for several days. The following season at first was quite wet, but in the latter part of May the rains had ceased, and the summer was exceedingly dry. Every rain, and in the middle and after part of the season, every appearance of general rain, (and there was considerable cloudy weather) was succeeded by fierce winds and cold unusual for the season. We almost had frost in July, and did have it sufficiently to kill vines and corn blades, on low grounds, in September. At the equinox of

September, 1852, warm misty showers prevailed. The following winter was open, with fog and rain much of the time. To the north of the State, (Boone county) where of course the temperature was generally lower, the earth was frozen pretty solid, and light snows fell instead of the misty rains of the south. In Macon county, the frosts did not enter the ground to the usual depth, and potatoes remaining in the ground undug during winter, came up in the spring.

During the last vernal equinox I was in Boone county, where the storm came off with a tremendous threatening of rain, and we had quite a good shower. Clouds veiled the sky for several days, but very little rain fell after the first shower, though there was something of a sprinkle now and then. After the first shower there was a partial clearing up, with some cold. The succeeding season, in places where the storm was as above, (if this theory be correct) should be a good one for crops becoming a "little dry," toward the latter part. The showers should be followed, in most cases, especially in the fore part of the season, by a decrease of temperature. One distinctive feature of this season, however little or much the quantity of rain may be, should be much cloudy weather, and great and protracted appearances of rain, as compared to the amount of water which actually falls.

Thus much I have said concerning the predication of meteorological changes, with the desire of adding my mite in exploring the vast field of agricultural investigation. Who else will gather and contribute their ideas and observations? Is Mr. Fowler's theory correct? My opinion of it is favorable, but I am not fully satisfied. O, that we had an industrial college in operation, so that our observations might be more numerous, more extended, and more accurate, and where our studies could be more profound.

However important it might be for the agriculturist to be able to predict with some certainty the future condition of the weather, yet I am inclined to believe that to govern the weather and to induce such conditions as might be most desired, especially as it respects the fall of rain, would be still more desirable. Should this scratch be brought forth, and my "critics" be not too severe, I promise to present rather a plausible theory for the control or least the modification of the fall of rain,

JOHN DAVIS.

Analysis of the Vegetable Oyster.

(*Tragopogon Porifolius.*)

BY J. H. SALISBURY, M.D.

This plant does not belong to the list of those used as food for stock; yet it is a plant of some interest in the way of the table, on account of its richness and peculiar flavor, which somewhat resembles, when cooked, that of the oyster.

The specimens examined were very large and tender. They were furnished by Mr. Douw, of Greenbush. The average widest diameter at the roots of six specimens was 1½ inch: their average length, 11 inches; average length of tops, 26 inches; average weight of each root, 44 ounces; average weight of the tops of each plant, 1½ ounce.

	Fresh Roots.	Fresh Tops.
Per cent. of water.....	81.220	84.460
" " dry matter.....	18.780	15.540
" " ash.....	1.465	2.170
" " in dry matter	8.333	13.964

6826 lbs. of fresh roots contain 100 lbs. of inorganic matter; 4608 lbs. of the fresh tops contain, 100 lbs. of inorganic matter.

100 lbs. of the inorganic matter of the roots and tops contain, respectively:

	Roots.	Tops.
Carbonic acid.....	24.60	21.90
Silieic acid.....	0.60	8.65
Phosphoric acid.....	15.60	5.05
Phosphate of iron.....	1.85	3.85
Lime.....	4.95	7.05
Magnesia.....	0.75	1.20
Potash.....	5.80	6.30
Soda.....	39.20	40.05
Chlorine.....	2.45	0.55
Sulphuric acid.....	3.90	5.15
Organic matter.....	trace.	none.
	99.70	99.75

100 lbs. of fresh roots remove from the soil a little less than 25 ounces of inorganic matter; 100 lbs. of fresh tops remove about 35 ounces of inorganic matter. These amounts contain, in round numbers, as follows:

	25 ounces.	35 ounces.
Carbonic acid.....	6.15	8.30
Silieic acid.....	0.15	2.00
Phosphoric acid.....	3.90	1.68
Phosphate of iron.....	0.46	1.28
Lime.....	1.24	2.35
Magnesia.....	0.19	0.40
Potassa.....	1.45	2.10
Soda.....	9.80	13.35
Chlorine.....	0.61	0.18
Sulphuric acid.....	0.98	1.72

It may be regarded by some as quite unnecessary to enter into a series of calculations which show the amount and kind of each ingredient removed from the soil by a given weight of the fresh roots and tops, separately, of the vegetable oyster. Those however who live in the vicinity of large towns, and who raise this plant in quantities for market, we think will find them valuable in the way of pointing out the kind and quantity of each ingredient moved by a crop, and hence the kind and quantity of each necessary to add. The aggregate quantity raised is, to be sure, but small; nevertheless, it is highly desirable, and equally important to have what are grown of the best quality. This is only to be effected, to any degree of certainty, by knowing what kind of soil is best adapted to them. This is established by determining accurately the composition of the plant. Hence the practical value of these calculations.

One ton of fresh roots contains of inorganic matter, 31.16 lbs., which is made up of the following bodies, in the proportions given below:

	lbs.
Carbonic acid.....	7.69
Silicie.....	0.19
Phosphoric acid.....	4.88
Phosphate of iron.....	0.57
Lime.....	1.57
Magnesia.....	0.24
Potassa.....	1.81
Soda.....	12.25
Chlorine.....	0.79
Sulphuric acid.....	1.22

These bodies are more than furnished to the soil by the following compost:

Ashes.....	33 lbs.
Common salt.....	10 "
Plaster.....	5 "
Barn-yard manure.....	1 ton.

The ashes furnish all the inorganic matter removed, in sufficient quantity, except the soda, chlorine, and sulphuric acid. The salt and plaster furnish these. The ton of barn-yard manure is added to furnish organic matter to the plant, to increase the absorbing power of the soil, to elevate its temperature, and to render more soluble the inorganic matter added.

We now come to see the proximate organic composition of the roots, which points out to us their nutritive qualities.

	100 parts of fresh roots.	100 parts of dry roots.
Water.....	80.610	
Fibre.....	2.764	29.618
Sugar and extract.....	3.695	39.279
Dextrine.....	1.435	15.378
Casein.....	0.172	1.849
Albumen.....	1.066	11.426
Starch.....	0.035	0.375
Resin.....	0.180	1.929
Ghiten.....	0.014	0.147
	99.941	100.

The roots contain a large percentage of sugar, dextrine, and albumen, which accounts for its rich flavor. They contain about five per cent more of water than the potato. Besides the above mentioned bodies, they have a small quantity of a principle which gives them that peculiar flavor and odor when cooked.

Ultimate organic analysis of roots.—100 parts of dry roots gave of

Nitrogen.....	1.980
Carbon.....	42.809
Oxygen.....	41.640
Hydrogen.....	5.644

Plow, Loom and Anvil.]

For the Farmer and Planter.

Guano for Cotton.

MESSRS. EDITORS.—I have delayed sending my subscription till now, with the design of contributing something for your columns—I have imposed this upon myself as a task once or twice a year; but it grows more and more difficult. The truth is, like a half handed carpenter, I can use but a few tools, and having done my best with these, I am at a loss how to get on farther. But my task—I must write about something—

“Perhaps it may turn out a sang,
Perhaps turn out a sermon.”

Well, sirs, have you seen the extracts from a letter, published in the Laurens Hérald of about the 20th January, from Willis Beaumont, Esq., giving his experiment with an acre of cotton? Please print those extracts, and what follows here, as a commentary. Mr. B. was formerly a resident of Laurens, and known to be a first rate practical planter, and every way reliable. I regard his experiment, as far as one experiment can be so, of the utmost importance to the cotton planter. Mr. B. manured one acre of cotton with 200 lbs. of guano, and gathered

2,100 lbs. of cotton from it; and from an adjoining acre, unmanured, gathered 1,000 pounds, giving a difference of 1,100 lbs. in favor of guano. We have other reports of experiments in this State of like import, if not altogether so favorable, but I have not room for them here. You would do well I think, to give as many of them as you can, to your readers. My object here, is to shew the importance of these facts to the cotton planter. First, let us use a few figures (which old H. C. Niles used to say never lie): Thus 200 lbs. of guano cost \$7.50; 1,100 lbs. of seed cotton, at present prices, \$33.00, leaving for profit \$25.50, from which deduct if you please, cost of picking out and ginning. But this is not all, we have 20 or 25 bushels of cotton seed to replace the guano in the next crop, so that in fact its good effects may be made to run through several crops. Suppose, for instance, the next crop should be (which as a general rule it ought to be, for the benefit of the land) wheat or other small grain—give to this crop all the seed which grew on a guanoed acre of cotton (in this instance in 2,100 lbs.) and it will be well manured—perhaps its product will be doubled; and who can doubt that the condition of the land will be much improved? Here then, we have *increased products and improving lands*; and this is exactly what we want. Increased products and improving land, instead of, as it is now, decreased products and impoverishing lands. With a rotation of cotton and small grain alternately, and guano once in two or four years, returning all the cotton seed to the soil, we will have larger profits, and what is of more importance, *improving farms*. In Great Britain, guano has long been used for almost every kind of crop, and particularly with wheat, her most important crop. The demand increases there with the increased knowledge of its value. In Maryland and Virginia, after but a few years trial, many of the farmers already regard it as an article of absolute necessity—so much so, that the Legislature of Maryland have requested her members of Congress to use every effort, to influence the federal government, to break up the monopoly in the guano trade, and to give it every facility. And in both of these States, last fall, some of the papers were threatening Peru with war, because the guano for putting in their wheat crops was not forth coming; for, they said, it was a provision by the God of nature for the benefit of

mankind, and no one had a right to withhold it or monopolize it. These facts are mentioned, simply to show the high estimate set on this fertilizer, by those who have tried it. If, then, guano has proved to be an article of so much value to the growers of wheat and other crops, I submit Messrs. Milledge, whether, with the experiments of Mr. Benham and others before us, we may not justly count on it becoming, when better known, more important to the cotton grower than to all others? If it sometimes more than doubles the wheat crop, so it seems it will also the cotton crop; but the wheat crop is, most of it, sold and but little of it ever returned to the land on which it grew. Not so the cotton crop—the stalks, the leaves, the seed, every thing but the bunt, may be returned to the soil; thus giving a kind of permanency to the products of guano—all but the bunt, which is mostly carbonaceous matter derived from the atmosphere.

What an encouraging prospect is here opened to the cotton planter! An increased product of cotton will be the least part of his gain; he may go on continuously improving his lands, and by consequence every other crop that he grows. Such are the probabilities; but let us not jump hastily to conclusions—let us try our experiments cautiously and warily—we have had enough of humbugs—nevertheless, let us prove all things and hold fast that which is good.

LAURENS.

P. S.—Will your able correspondent "ABBEVILLE" be so good as to give us the botanical names and characters of the carrot weed or rag-weed, the hog-weed, crab-grass and broomsedge? There is another weed—a new comer—of the astor family, I think, for which I know no popular name, which whitens some of our fields with its flowers in the fall. I am inclined to think the carrot weed is one of our best fertilizers.—Who ever will give us an intelligible account of the weeds of the South, their habits, uses, injurious effects, &c., would confer an important benefit to Southern agriculture. The field is large and almost unexplored.—Will not "ABBEVILLE" do it?

We have not been able to lay our hands on the extract alluded to by our correspondent, though we had read and made it for insertion. If we can get hold of it again we will yet insert it.—EDS. F. & P.

To Cure Wounds in Fruit Trees.

The following directions were published by William Forsyth, King's Garden in England, many years ago, and have often been found valuable.

Take one bushel of fresh cow dung, and a half a bushel of lime rubbish from an old building, that from the ceiling rooms is preferable, half a bushel of wood ashes, and two quarts of fine sand. The last three articles to be sifted fine, and then mixed with the first working them together until the mixture is very smooth and soft, like plaster.

The tree is to be prepared by carefully removing all decayed or injured portions, down to the sound, fresh wood, leaving the surface smooth and rounding off the edge of the bark very smooth. After this the above plaster is to be spread very carefully and smoothly over the cut surface and somewhat beyond. The plaster should be from an eighth to half an inch thick, and smoothly and thinly finished off at the edges. After the plaster has been spread, it should be dusted over with a mixture of four parts of dry ashes, to one part of fine sand once in twenty or thirty minutes, until the moisture is all absorbed.

Fattening Hogs.

It is pretty generally conceded that the cheapest way to make pork is to keep a breed of swine that, coming in April, shall be fat and weigh 250 to 290 lbs. by first of November. We have no doubt but this is the case—that pork can be made, all things considered, much cheaper in this way than any other. Yet we have a liking for a "twenty score" hog. Hams from such a pig are deservedly esteemed by all epicures, and will ever command, if well cured and dried, high prices.

Some will say that you can make spring hogs weigh 400 lbs. by the fall. This in rare instance has been done, but we know of no breed which, under ordinary treatment, will average any such weight. If heavy hogs are desired they must be farrowed in the fall and killed when 12 to 15 months old.

In this as in most other cases, an exclusive adherence to one system, to the entire abandonment of the other is unwise. On an average sized farm, we would always have one litter of pigs in the fall, and one, or two, if you like, in the spring. If you have more fall shoats than you can winter well on

of fat, sell a few to your neighbors when six weeks or two months old for \$1.50 or \$2.—The rest will run in the barn-yard, eat up what would otherwise be wasted, and be fine fellows in the spring, ready to graze as soon as clover is ready for them. Clover, sour milk, whey, wash of the kitchen, &c., will keep them in good growing condition during the summer,—green corn, small potatoes, wind fall apples, nubbins, and bugsy peas will finish the work,—and in this way pork will be produced without the consumption of any of the high-priced cereal grains which require that their effect on the animal shall be greatly beneficial to compensate for their exhausting effect on the soil producing them. On the other hand, as we said before, an hundred weight of pork can, probably, be made from spring pigs cheaper and at less expense to the farmer than from any other. To do it, however, more feeding food is required. You must not keep too many. The shoats must be kept fat all the time or they will not mature early enough.

Nothing will pay better on a wheat farm, taking manure into consideration, than to grow peas for feeding green to pigs during summer and early fall. They do well on them, and what they do not eat they will trample into the richest kind of manure.—To fat hogs on good corn worth 70 cents per bushel will not pay, unless an unusually high price is obtained for the pork. The price of cattle food, and the price of meat produced by its consumption, would, under normal conditions, always indicate the true relation which they bear to each other. But this normal condition does not exist; thousands of bushels of corn are annually produced in the fertile valleys of the west, that are not worth 25 cents per bushel. This corn can be used for pork making and the pork be shipped to our market at little cost, thus disturbing the natural equilibrium and rendering it necessary that we should sell our corn rather than convert it into pork or beef.

We must not attempt competition with our western brethren in raising corn for pork making, but rather aim at raising those crops which from their bulk and weight are not subject to such competition. But to do this we must have manure, and to make this we must make pork or beef or mutton. Ah! there's the rub. To grow two tons of timothy hay per acre, or 40 bushels of

wheat, we must sooner or later return to the soil. Without at present entering into the reasons for our belief, we think that fattening hogs by growing peas to feed to them green, and early in the fall, and before they are much injured by the bug, will be found one of the most economical means of enriching the soil.—*Rural New Yorker.*

Draining and Irrigation.

"In the fall of 1849 I had determined to under-drain a portion of land which had been in former times subdivided into lots, containing from one to three acres, by heavy walls, composed principally of small stones; and as a part of these lots were in cultivated fields, and the other parts in unsightly bushy pasture land, I had determined to throw several of these lots into one, making one lot of 23 acres—that land being what we term high-hill land, being located within one half mile of the river, and still more than 500 feet above its banks, and is what is generally termed a loamy soil, with a stiff clay sub-soil. My plan of operation was to dig a dike close along by the side of these squalid and ancient walls, which ditchies swallowed up about one half of the wall and the balance of these walls was taken to fill other interior ditches, which were cut 3 feet by 2½ wide, one in every five rods, with cross ditches to carry the surplus stones of the old partition walls, as well as all the surplus stones on the surface of the land, and they were filled within eight inches with stones, and carefully covered with much brush or leaves, and a sufficient quantity of the soil put back to come to a level; and the balance of the earth from the ditchies was used for grading any low spots that were to be found; and to show the trouble I got into by not employing a practical engineer to lay out my work, and from my own ignorance of the matter, I will state that this plot of land has a gradual uniform descent of about two degrees to the north, until it strikes the road leading east and west, and which road about equally divides my farm. Below the road I have about the same kind of land as where I had been ditching above. In the spring of 1850 the water which accumulated in about 400 rods of these drains was emptied into the main drain, and then into one prepared at the side of the road for the purpose of being carried off through what I supposed to be a natural channel, and through land belonging to one

of my best neighbors; but in this I was mistaken. In the first place, my ditch by the side of the road would not hold more than one-fourth of the water which was collected in the drains above; and the consequence was, that the road was badly washed, to the great injury of myself and the public, and my neighbor objected to its being turned over to his pasture in such unnatural quantities; and not wishing to injure the public, nor my neighbor, what was to be done in this case no one could tell. For my own part I began to fear and some of my friends were ready to join me, that I had commenced a rash undertaking without looking at the results; that water enough to drive a saw-mill on high and apparently dry land was not so easily managed. In this dilemma I inquired of the President of our Agricultural Society what could be done, knowing that he had handled much water in the way of irrigation on his river land, and he told me at once to turn the water across the road, and throw it over some mowing lots below the road, where the descent was more rapid—say 5 or 6 degrees. This was done, and to the utter surprise of every one, seven loads of hay were cut in July, where four loads of like dimensions were the extent that was ever cut before. This was from the hay harvest of 1850; in that of 1851, the difference in favor of the crop of hay was still larger. I have twelve acres more, next adjoining this, and I propose irrigating these also. Is there not something strange in all this; that water can be taken from these drains, and, after running one hundred rods in an open ditch, then be used for irrigation on similar lands? It is passing strange to me, and yet I should be loth to part with this water for what my ditches cost, which were only intended for under-draining above. Would not a thorough knowledge of irrigation and application of water to most of our lands, pay many millions annually?"

[*Patent Office Report,*

Ore-had Grass--*Dactylis glomerata.*

We know little of the extent to which this grass is grown among us; but we imagine it is as yet little known from the fact that the seed is scarcely enquired for by farmers.—We have had it growing in our grounds on a small scale for several years, and have conceived a favorable opinion of it from its strong, pushing tendencies both in wet soil and dry. It grows in tufts and would

need be sown pretty thickly to cover the ground; yet we conceive from our observations with it, that it will take care of itself with a medium chance. Any one who has had experience with it would do a public favor by communicating with us about it.—The following is from a Kentucky paper:—My observation and experience has induced me to rely mainly on orchard grass and red clover; indeed, I now sow no other sort of grass seed. Blue grass and white clover are indigenous to our soil—they come in of themselves. I do not look upon them by any means as intruders, but grand auxiliaries; these with orchard grass and red clover, make the best pasture.

Orchard grass and red clover, make the best hay of all the grasses for this climate, [Kentucky;] it is nutritious and well adapted as food for stock. I prefer orchard grass to all others; it is ready for grazing in the spring ten or twelve days sooner than blue grass, or any other that affords a full bite. When grazed down, and the stock turned off, it will be ready for regrazing in less than half the time required for blue grass. It stands a severe drought better than any other grass; when all other sorts are dried up for want of rain, it keeps green and growing. In summer it will grow more in a day than blue grass will in a week. If the ground is properly prepared, a sufficiency of seed sown on it, the orchard grass takes possession and keeps it. It will not spread, but it keeps out noxious weeds and intruders. I think it is from its abundant roots that most of its good qualities come.

Sowing the seed.—Prepare the ground nicely by frequent plowing and harrowing, as it is customary in sowing flax or hemp, as early in the spring as convenient; the sooner the better.* Sow one bushel and a half of orchard grass seed to the acre, and three or four pints of red clover seed. It is of great importance that the seed be cast uniformly over the ground. Mark off in suitable widths for a cast of light seed; sow half the seed, then mark off crosswise, and sow the remainder. Sow the red clover seed at the same time, but separately. If the ground should be cloddy, the back of a two horse harrow would be better.

Orchard grass is naturally disposed to form and grow in tussocks. The best preventative is a good preparation of the ground and a sufficiency of seed uniformly sown.

Weeds will spring up in May, wherever

strong, and will crowd and perish out the young plants of orchard grass. To remedy this evil it is absolutely necessary to go over the ground with a keen scythe, and mow down weeds, grass, and all, as if you were mowing a meadow for hay. This should be done early in June, according to the season. There will then be a fine fall grazing for young stock.

This work done, you will have a fine plat for either a permanent meadow, or fine pasture. Every farmer ought to raise his own grass seed, and have some to sell, which will soon be the case if a few bushels of seed only are procured and put in as I have described. He can then sow his seed how and when he pleases, and little experience will teach him the best time and the best method. Grazing orchard grass after the middle of January, diminishes the yield of seed.

To save the seed.—The seed head does not ripen regularly; if let stand too long, much of the best seed shatters out; if cut early, the seed in the lower part of the head is immature—practice with judgment, will fix upon the right time. The seed stem puts up above the blades of the grass, and the heads of clover. An expert cradle is best—the sickle may be used—tie up in sheaves—put about twenty-five in a shock, no cap—to remain a short time—some of the immature seed will ripen in the shock. After all the moisture is exhausted, it is then ready for threshing or treading out. With the rake and hay fork you get off the straw—there is not much chaff. I use three sizes of riddles; the first a coarse one to get clear of the remaining straw, &c., then pass it twice through a finer one, allowing the seed to pass through easily; then use the fine riddle, freeing the bulk from imperfect seed and dust. It is now ready for barreling or for sacks; it ought not to remain in a large bulk.

As soon as the seed is cut mow for hay; the sooner after the seed is cut the better. The second crop will be the better by mowing the field soon after the seed is cut.—This second crop should be the main reliance for hay for the farm, and there is no grass that produces such good hay for every kind of stock, horses and mules included.

The late Judge Peters of Pennsylvania, (who was at the head of all agricultural improvements in that great State for many

years,) preferred it to all other grass. So did that spirited and intelligent gentleman, John Hare Powell, of cattle celebrity, of the same State.

* In the South we would prefer sowing in September or October.

EDS. F. & P.

Meadow Oat Grass.

MR. EDITOR.—I see in the present No. of the Farmer, inquiries, by a North Carolina farmer, in relation to grasses, &c. One species to which he calls particular attention is the Tall Meadow Oat Grass, (*Avena elatior*). I have paid some little attention to this grass, for a few years past, with particular attention to sheep feeding. I have seen the great disadvantages under which sheep husbandry labor, for want of an *early bite* of succulent food for ewes and lambs, and my experience has led me to the conclusion that there is no grass equal to it for that purpose. It has advantages over orchard grass (*Dactylis Glomerata*), in several particulars. It is considerably earlier, giving a good bite some time before. It is equally as thick in putting forth after the scythe, or after being eaten off, and continues later in the fall without being affected by frosts. It is not so choice in the kind of ground in which you grow it. It will grow on high ground too dry for orchard grass, and on much thinner ground. Orchard grass, to pay at all for hay or pasture, ought to have a rich, moist loam—not that the oat grass does not delight in rich land, as all vegetation does, but it will do better on thinish land than any other grass I know.

I have said nothing about its qualities as a hay grass. I give here an extract from "Dickson's Agriculture." "This grass is found the most beneficial when retained in a close state of feeding. It makes good hay and experiment has shown it to afford a greater weight of produce than most other grasses. On the Continent in comparison with common grasses, it is found to yield in the proportion of twenty to two."

Prof. Low, in his Elements of Practical Agriculture, says: "It is a coarse though productive grass, growing rapidly after being cropped, and producing an early and plentiful herbage in the spring." He, however, gives it the go-by, because it is said to have been found upon analysis to contain more of bitter and saline matter than any other pasture grasses. At this I was much

astonished, seeing that he gives Yarrow, (*Achillea Millefolium*) as a plant for forage or herbage, which is nothing but bitter, and which with us is utterly rejected while any thing else can be had by the stock.

While I am on the subject of grasses, I would suggest to some of your amateur farmers, that they turn their attention to some of the varieties little known in this country;—one highly spoken of by all agriculturists, and everywhere found in our country, from wet bottoms to the high grounds, I ask their attention to—it is doubtless a native grass. I mean the Meadow Fescue, (*Festuca Pratensis*). Low says it "is justly ranked amongst the superior grasses. Although a large, it is not a coarse plant, and does not, like some of the larger grasses, form tufts in growing. The leaves are succulent and readily eaten by the larger pasturing animals."

You will permit me to differ from you, in suggesting a mixture of grass seed for mowing grounds.* I think that timothy ought not to be mixed for the scythe with the earlier varieties. All grasses for permanent meadow, should blossom as nearly as possible at the same time.

I go for timothy pure and unmixed, because it is one of our latest grasses, if not the latest. To say anything in its praise as a hay grass, would be useless—for horses particularly; and where cut in blossom it suits any kind of stock.

I ought to say a word or two on the subject of seeding the meadow oat grass. It is better to be sown in the fall—may be put in with any kind of grain. I have tried it this fall with a sprinkle of turnip seed, both of which look well. By the way, I may mention that last fall I put in a piece of meadow in timothy with a sprinkle of turnips, of which we made about 800 bushels, and cut at least two tons of hay per acre from the same ground this summer. I could not see that the turnips injured the grass in the least, neither did the grass injure the root crop. I have three or four bushels of the oat grass seed left that I can dispose of.—*Cor. American Farmer.*

*Our correspondent has misunderstood us.—We have always contended that where hay is the sole object, that timothy should be sown alone; but that where hay and pasture were the objects, that a mixture of the grasses should be seeded—and so we say now.—*Ed. American Farmer.*

We have never before indulged in copying poetry into our columns, but the following, from the *Mark Lane Express*, is so good, that we cannot withstand the temptation to place it before our readers.—ED. WORKING FARMER.

God bless Ye, Merry Harvesters.

BY EDWARD CAPERN.

God bless ye, merry harvesters, down with the golden grain;
I love to hear your sickle strokes enlivening the plain;
And love to see those happy smiles which brighten up your face,
Gleam through those briny drops of sweat, and give your checks a grace.

I love to see your waving fields, like undulating seas,
And green blades flutter in the wind, like pennants in the breeze;
But more I love your monuments, reared by the hand of toil,
Those yellow sheaves and golden stacks which crown the generous soil.

Ye sing of other harvesters, who mow down fields of men,
Who widows make and orphans too, then defy the slain;
But tell me are those crimson piles heaped up in bloody strife,
Deserving more the song of praise than bread, the staff of life?

Long may ye live, and healthfully, to quaff the cup of peace,
And may your flocks and little ones, and lowing herds increase.
And oh! may He who giveth bread send plenty to your door,
Enough to spread the rich man's board and satisfy the poor.

God bless ye, merry harvesters, let every farmer sing,
Till with the sound the hills awake and lowly valleys ring;
'Neath cottage, hall, and temple-roof prolong the joyous strain,
God bless ye, merry harvesters, again, again, again.

God bless ye, merry harvesters, who plow the fallow sod,
Who sow the seed and harrow it, then leave the rest to God.—
To Him who sendeth sun and rain, and seed, and harvest time:
God speed ye all, ye sturdy sons of England's happy clime.

And ye who own the fruitful soils as Beaz did of old.

Pray don't forget those helping hands that store your purse with gold;
But when young Ruth the gleaner comes, go bid your honest men
Drop here and there, and liberally, an ear of precious grain.

God help ye all, ye harvesters, and when that day shall come,
When those who sow and reap in tears shall shout the harvest home,
May ye among those ripened shocks be found of which we read,
And find yourself safe lodged in Heaven as precious seed. [Bideford; 1853.]

Valuable Water-proof Composition, For Boots and Shoes, Harness, Carriage Tops, Ships' Ropes, &c.

EDITORS O. CULTIVATOR:—Dr. G. Miesse, a German physician of some celebrity in these parts, has invented a composition, which, if generally used might effect a saving of several millions of dollars annually in the United States. It is for rendering leather, cordage, &c., water proof, soft and durable.

The first trial the Doctor made with the composition was on a new pair of boots—the bottoms and upper leather being rubbed with it before wearing them, and applied once every 2 or 3 weeks afterwards—he has worn them almost daily for seven years. A pair of shoes treated in the same way, have been in almost constant use for four years, and are now better than most new ones.—The Doctor says, if the Government would introduce its use in the army and navy, for harness and soldiers' boots, and for ships' cordage it would greatly add to the durability of these articles, as well as to the comfort of those who use them. Farmers and others who are much exposed to snow and mud, will find this composition just the thing to keep the feet dry, and preserve the health, as well as a great saving of shoemakers' bills.

RECIPE.—Take an iron pot and put into it 4 ounces of good gum elastic (India rubber), cut in strips or small pieces, and a pint of fish oil; set it on a fire of hot coals, and stir with an iron rod till the gum is all dissolved (it will require much heat), then add by degrees four quarts more of fish oil, stirring it well; take it off the fire, and pour it into a can or jug for use.

Using have the composition a little warm, and apply with a brush or sponge, a liberal

coat to the uppers and soles, so as to saturate the leather. If cold weather, it should be done in a warm room or near the fire. Repeat the application as often as every month in summer, and every 10 or 12 days in winter.

As this treatment will make boots and shoes non-conductors of electricity, as well as impervious to water, the Doctor says there should be a few copper nails (iron will do) driven in the soles to carry off the surplus electricity of the body, otherwise it will prove injurious to health, as is the case with gum elastic overshoes, if worn for a length of time.

To render ships' ropes, cordage, fishing lines, nets, &c., water-proof it is necessary to let them soak in the mixture.

Remember that no linseed oil, spirits of turpentine, tallow, or beeswax, are to be added to the mixture.

From the Granite Farmer.

Manures, Peat and Muck.

Mr. Phinney, of Lexington, the well known Agriculturist of Massachusetts, after much experience in the use of peat as a manure, gave it as his opinion, that one cord of stable manure, fresh and clear, compounded with two cords of peat, made a manure, equally valuable in fertilizing properties, as three cords of stable manure. The experience of other practical farmers, substantiates the opinion of Mr. Phinney.

Judge W. A. Hayes, of Berwick, Me., lately deceased, a practical and scientific farmer, had much experience in the use of peat or muck as a manure. His experience tallied with that of other distinguished farmers, who have written upon the subject.—He used muck extensively upon his farm and considered it one of the best manures. In fact, it was very much owing to his muck swamp, that he was able to make of land under cultivation for near two centuries, and "worn out," as the saying is, one of the most productive farms in Maine. In giving a description of his farming operations, Judge Hayes said, "I have within twenty rods of my barn a swamp of a few acres of muck, ten or fifteen feet deep, resting on white sand. From this, I annually, after haying, haul more than one hundred and fifty loads of fifty bushels each, and deposit it in yards on the backside and further end of the barn. In these yards we also place the potato tops, coarse grass, fern and

small bushes annually mowed in the pasture, and other coarse material which would not be fit for use as a manure the next spring.—No stock goes into these yards except the sheep during the winter. After the cow-yards and hog-yards are cleared of their contents in the spring for planting, this muck and other materials are carted into the cow-yards on the other side and end of the barn and to the hog yards near by. These yards are several times plowed or dug over during the summer. To this mass we occasionally add more muck, turf, soil, lime and ashes, so that no unpleasant trench shall arise therefrom. * * * A part of this compost is taken out in the autumn, and laid in large heaps on the ground, to be planted the next season and the residue is taken out in the spring, intermixed with the winter manure. The same course is pursued yearly."

This is a good practice. Ammonia is supplied to the muck by the droppings of the sheep, during the first winter and by those of the cattle during the second winter, and thus the muck is converted into a manure, resembling in all of its constituents, in fertilizing properties—*cow or stable manure*.—In addition to this, the ashes and lime added, and the action of the frosts of two successive winters, perform appropriate functions upon the compost, in evolving ammonia, decomposing the vegetable matter and rendering the whole mass completely friable.

Cultivation of Barley.

MR. EDITOR—I am anxious to learn something of the nature and cultivation of barley, and know not to whom to apply with as much certainty of success as to yourself. The joint worm has destroyed the wheat crop in this section, and it is difficult to determine what fall crop can be successfully substituted for a few years, until this pest shall leave us. Our entire labor is applied in the spring, to the culture of corn and oats, so that tobacco or any other spring crop could not relieve us of the dilemma. Barley I am told is sown in the spring and fall, from which I infer there are two varieties of it, and you will confer an obligation on me by giving me all the information you can in respect to the fall crop. The following enquiries I wish particularly to have answered. 1. What is the preparation of the soil? 2. What the time and mode of seeding? 3. When does it mature? 4.

How and when harvested? 5. When thrashed? 6. What its yield in comparison with wheat? 7. Where is there a market for it? 8. What its price generally? 9. Is the straw good winter food for cattle? 10. Is it a more exhausting crop to the land than wheat? 11. Does clover take well with it? 12. How do guano and plaster act with it? What kind of soil and climate are best adapted to its growth? I shall be pleased to hear from you at your earliest convenience, and have no doubt that an article from your pen on this subject in the next number of your most excellent work, would through this section of the country be read with both profit and pleasure.

S. S. BRADFORD.

Reply by the Editor of the American Farmer.—1. The preparation of the soil is the same as for wheat. The ground should be deeply ploughed and thoroughly pulverized by harrowing, or by rolling and harrowing,

2. The time of seeding, is either fall or spring. If seeded in the fall, it should be sown about the same time as wheat. If in the spring, as soon as the ground can be got in good order.

As to the mode of seeding, it is the same as that of wheat. It is sown broadcast or in drills. The depth of sowing the seed from 1 to 2 inches.

3. As to the time of its maturing, it varies, being influenced by soil and location; its usual time of ripening if sown in the spring is about five months.

4. It is harvested the same as wheat.—It shou'd, however, be cut before the stalks turn yellow and become arid. A safe rule would be, to cut when the stalks just under the head for 4 or 5 inches, turn yellow. If left until the entire stalk becomes yellow and hard, it woold be subject to shatter and waste. If cut when the lower part of the stalk is green it must be left in the field in sheaves until it is perfectly dry, otherwise it would be liable to heat in the stacks and become injured. After being dried in the field it should be stacked in the same manner as wheat. It would be well to stack it around a pole to afford ventilation.

5. It is threshed in the same way as wheat, though it is more difficult to separate the grain from the culms. It often requires to be passed twice through the threshing machine.

6. In a good rich loam or mould, if the ground is well prepared and finely pulverized, it will yield from 25 to 40 bushels per acre, provided the season is not unfavorable; much larger quantities have been grown on an acre. A heavy rain at the time of maturing is highly detrimental to large products.

7. Its chief consumption in this country is for making malt liquor, its market any of the larger towns and cities, where there are breweries—and breweries are almost every where, and greatly on the increase. Though thus chiefly used, barley would form, if chopped, an admirable alternate food for stock, generally. When hulled it is extensively used for culinary purposes.

8. Its price ranges from 65 to 75 cents, and always finds ready sale. The demand is always more than adequate to the supply.

9. If the barley be cut when the stalks are green from 4 to 5 inches below the head the straw makes good food for cattle.

10. We do not think it more exhausting than wheat.

11. Clover will take well with it, though if heavy, it is apt to impair the quality of the barley, making it sprout, if left till dead ripe before being cut, which it should never be. This might be prevented, in spring sown barley, to a considerable extent, if the clover seed were delayed being sown until the barley plants were up 4 or 5 inches.—The clover seed should be rolled in. On fall sown barley, the sowing of clover seed should be delayed some two weeks later than is usual on wheat, and should be rolled in.

12. Guano and plaster, say 200 pounds of the former and a peck of the latter, per acre mixed together, would make an excellent manure for it.

13. The soil best adapted to the culture of barley, is a deep fertile loam, or light mold. It does not require so stiff a soil as wheat, but a stiffer one than rye. A good crop of barley cannot be produced on poor land. Besides the guano and plaster, before spoken of, which should be ploughed in, a few bushels of ashes would be found an excellent adjunct. Four bushels of bones dissolved in sulphuric acid, mixed with five bushels of ashes, sown broadcast and harrowed in with the barley, would make an admirable dressing for an acre.

Barley stands heat and drought well, and

will grow in a greater diversity of climates than any other member of the grass family.

There are many names given to different kinds of barley, but they appear to be divided into three kinds, the two rowed, the four rowed, and the six rowed. Winter barley is mostly sown in mild climates, as in the south of France, Spain, and Italy. This variety would suit the south best.— Spring sown barley, it is said, gives the largest products. The variety preferred for the spring seed, is the two rowed.

The Chevalier barley is said to be most valuable for the purposes of brewers.

As to the quantity of seed per acre, from $1\frac{1}{2}$ to 2 bushels are the right quantities.

The Hog—A Manure Maker.

One of the best manure makers is the hog. Every farmer is supposed to have one or more of these animal manure makers, and if he but take care to provide him with material, he will make double the worth of manure—of his own body in the market. The great value of the manure of the hog consists in the ammonia so abundant in it, supplied of course, most by the urine of the animal.

Now the urine of the hog is too often suffered to run to waste. To save this, there should be connected with every farmer's hog sty, a yard for muck or loam. To this may be added, the various kinds of litter, found about the garden and farm, in the shape of weeds, fern, bushes, leaves and the like.— The urine of the hog will not only be absorbed by the peat, muck or loam, but he will masticate the vegetable litter and will mix the whole compost together, in a much more satisfactory manner than can be done with the hoe or spade. Now the manure of the hog is much more valuable than that of any other animal, as it contains phosphate or Soda, Lime and Magnesia, not in the urine of the cow, horse or sheep; or if so, hardly to be traced. And as a cord of loam saturated with the urine of the hog sty, is of greater value than either. If the proper materials are furnished a hog in a proper yard, a single hog will make ten cords of good manure in a single year.

And there is a little or no difficulty in teaching the hog to make all of his deposits upon the muck heap. A little care will make the hog nice and particular in this matter. A hog will generally void where

there is a wet place. Now if you wish to lead your hog to void upon the muck, make a funnel shaped hole in the centre of your muck heap, and keep this wet with water for a day or two, and he will choose that place for voiding. If he should not, fasten him out of his sleeping apartments for a day or two, and he will be sure to choose the prepared spot for his deposits.

Aside from the advantage arising from his addition to the muck heap, you in this manner make a neat and particular animal of one generally taken to be naturally a very dirty one.—*Granite Farmer.*

From the New England Cultivator.

A Workshop on the Farm.

A workshop is an invaluable appendage of the well regulated farm, and a component part of the machinery of a thorough and economical system of management. The "old foggy" farmer may be startled at first by the proposition: but a few minutes unprejudiced reflection would convince him of the fact.

Of course a workshop adapted to all the ordinary purposes of the farm, need not be as expensive or various in its details as that of the carpenter or wheelwright. After a bench has been put up, from ten to twenty dollars will supply the shop with a sufficiency of tools to do almost any job, which the farmer feels himself competent to undertake. The expense, then, is not a very serious objection to the arrangement. The shop and tools will pay for themselves in a few years.

A cart, a plough, a tool, a fixture about the house or barn is destroyed, lost, because the necessary repairs were neglected in the time of it. The farmer could not spare the time to go half a mile or a mile to the carpenter, or the wheelwright's shop, and "for the want of a nail, the horse was lost." A thousand good and useful articles might be made or mended during the winter, or on a rainy day.

With the practice, would come the necessary skill in using the tools. A man who is naturally clumsy, would soon acquire sufficient dexterity to enable him to "make and mend."

Regarded as forming part of the practical education of the farmer's boys, the workshop would be an immense advantage.— Mechanical ingenuity and skill are valuable additions to the capital stock of the farmer. They are dollars and cents to him. But,

as a general thing, the boys are permitted to grow up without an opportunity to develope whatmeehanical talent they may possess, or to obtain any dexterity in the use of tools. The rake and the hoe are the boundaries of their skill.

"But I don't want my boy to be a carpenter or a tinker," says one. Suppose you do not; you would like to have him know the difference between a foreplain and an ox-cart. Whatever tends to develope the physical or mental faculties, is advantage to the boy. Skill in one mechanical pursuit begets skill in another.

For precisely the same reason farmer Narrowminded did not wish his boy to study grammar. It would be of no use to him; he did not intend to make a lawyer or a minister of him. He never studied grammar, and he always got along well enough without it. Yet this branch affords a very salutary discipline to the mind; it sharpens the judgment, quickens the perception—in short, develops all the powers of the intellect. The exercisec of the same faculty that enables the boy to distinguish between a noun and a verb, will enable him to calculate the operations of his future calling.

Farming needs a good judgment; and it matters not whether it has been acquired by using a foreplain, studying grammar, or the every day experience of life. Whatever enlarges the capacity of mind, or enables it to act with skill, promptness and energy, fits the young man for his calling.—A bad carpenter will seldom make a good blacksmith. What educates for one pursuit, is a general qualification for any other.

The use of tools, with the mental discipline it induces, is a practical benefit to the farmer. Though his boys may never become mechanics, mechanical dexterity will enable them to think and act to greater advantage in any pursuit they may choose.

For the Farmer and Planter.

Dog Mania.

MESSRS. EDITORS:—I see so much complaint about the sheep killing dogs that I am tired of reading about them, so I will try to give sheep raisers my experience in hog raising, and see if they cannot learn something from such poor experieuee. I think there is much said about dogs and the legislature that is useless. Suppose the legislature was to tax the dogs, that would not prevent them from killing those valuable

sheep of yours one day, for there would be dogs enough to kill all the sheep still, and none would be saved by that, and if they were a little the better of it, you might cause something worse, for in this neighborhood there is hundreds of negroes, and they kill hogs as bad as the dogs do sheep. Now you would think it singular in us to petition the legislature to protect our hogs in our pastures; yet, if our dogs were destroyed, we might need protection that we are not in possession of. And you will recollect it is much easier to guard against a dog than a man, who can steal that which is under you whilst you are asleep. The way myself and others save our hogs, we need some good dogs to assist us. After we have done our day's work we want rest at night, and we sleep very sound some times—the dogs have not labored, and are more wakeful than we are, and by their loud barking awake us,—some of them will take the rogue up or make him hunt a tree to save his own flesh from their sharp teeth, and some will not allow their neighbors dogs to steal.

We keep our hogs in a pasture where we can command them at pleasure during winter and summer, and at night we shut them in a lot near the dwelling where the thief can be easiest heard, at which time the dog is of great importance to assist in the dark, and by acting thus we can raise hogs when we could not in any other way. When our hogs are picking up the shattered corn and peas we lose most, for they are not hungry and we cannot often pen them. And as for those dogs that go in search of mischief, use gunpowder and heavy lead, and it will soon cure them of killing sheep, and robbing meat houses, and stealing your eggs; and I would advise those gentlemen who raise sheep to build lots for their sheep, and shut them there every night as they should be, and they will have no need for legislative aid, so much desired by them. Any gentleman who is a sheep raiser, can make a lot that will be suffieient to keep dogs from them, and if they are too lazy or too stingy to do so, they suffer loss. If it was as easy to shut out negroes as dogs, there would be less use for them than there is. I hope those gentlemen who raise sheep will try the experiment, and save those valuable animals from the pests they complain of, and I hope they will be satisfied and successful. I shall be glad to hear that the plans have been tried by all who think sheep worth saving, and

that the shepherd, and not the useless dogs who deserve to be treated only as I have prescribed, may eat the mutton.

JAMES BROOM.

Silverton S. C. Feb. 7, 1853.

REMARKS:—We publish the above communication from our correspondent, not because we concur in opinion with him, for we are decidedly anti-dog; but we concede to each and every one of our subscribers the right to be heard on every subject legitimate to our paper.

It is not the wish we presume of the advocates of a dog law thereby to exterminate the whole canine race. It is believed, and very reasonably too, that a tax on dogs would greatly reduce the number of worthless prowlers in our country, for no man would pay a tax on any but a valuable dog, such as have nothing of the wolf character attached to them. Such dogs would be better fed and cared for, and instead of prowling about nightly destroying sheep, would at all times be found at his post ready to protect, his master's property.

If a legislator we should be in favor of allowing every house-keeper, whether man or woman, to keep one dog free of tax, but on a second, or any number above that we should advocate a tax, doubling on each, which we believe would ultimately more effectually in reducing the nuisance of sheep killers than would leaden balls, especially if shot at night, the time when dogs are most apt to do their work of destruction.—EDS. F. & P.

Ladies and Agriculture.

As shewing the interest English ladies take in agriculture, I cannot but relate a casual interview I chanced to have with an English lady, in going up in the Express train from London to York. Her husband had bought a book at the stand as we were about starting, and remarked to her that "it was one of her favorite American authors—Hawthorne." I casually observed, "I was pleased to see young American authors found admirers with English ladies," when the conversation turned on books and authors. But I said to myself pretty soon this is a literary lady—probably her husband is an Editor or Reviewer, and she uses the "scissors" for him; at all events, I must retreat from this discussion about authors, modern poets, and poetry. What should a farmer know critically of such things? If I was only in those fields—if the conversation

could be made to turn upon crops or cattle, then I should feel quite at home." I finally pointed out a field of Wheat, and remarked it was very fine. The lady carefully observing it, said: "Sir, I think it is too thin—a common fault this season, as the seeding was late;" "those drills," she added turning to her husband for her confirmation, "cannot be more than ten inches apart, and you see, sir, the ground is not completely covered—twelve and even fifteen inches is now preferred for the width of drills, and two bushels of seed to the acre will then entirely cover the ground, on good land, so you can hardly distinguish the drills."

If the Goddess Ceres had appeared with her sheaf, or her cornucopia, I could not have been taken more by surprise. A lady descanting on the width of wheat drills, and the quantity of seed!

"I will try her again," said I "this may be a chance shot," and remarked in reference to a field of plowed ground we were passing, that it broke up in great lumps and could hardly be put in good tilth—"We have much clay and like this," she replied, "and formerly it was difficult to cultivate it in a tillage crop, but since the introduction of Crosskill's Clod Crusher they will make the most beautiful tilth on these lands, and which are now regarded as among the best wheat lands."

The conversation turned on cattle; she spoke of the best breeds of cows for the pail, (the Ayrshires and Devons,) told me where the best cheese was made—Cheshire—the best butter—Ireland—where the best milk-maids were to be found—Wales—"Oh!" said I, "I was mistaken; this charming intelligent woman, acting so natural and unaffected; dressed so neat and so very plain, must be a farmer's wife, and what a help-mate he has in her—yes, a single bracelet clasps a fair, rounded arm—that's all." The train stopped at York; no sooner had my travelling companions stepped upon the platform than I noticed they were surrounded by half a dozen servants—men and maids—the men in full livery. It turned out to be Sir John and Lady H. This gentleman I learned was one of the largest land-proprietors in Berkshire, and his lady the daughter of a Nobleman, a Peeress in her own right; but her title added nothing to her, she was a noble woman without it.

It is a part of our task to excel in Horticulture, in which female taste and skill must aid us. We must embellish our homes; we must make them sweet and pleasant

homes. The brave old oaks must be there; the spacious lawn with its green sward—and the fruit orchard, and the shrubbery, and the roses, the vines festooned and trained about the walls and balconies—even the birds will think that a sweet home and will come and sing and make melody, as though they would “teach the art to imitative man.”

Such a home will be *entailed* to our children, and to their children—not by statute laws of entail, but by a higher law, the law of nature—through the force of sympathy—the associations of childhood,

“The orchard, the meadow, the deep tangled wild-wood,

And every loved spot which our infancy knew,” These will hold them to it—these early memories—which we should take care to deepen with a binding and indissoluble tie.

Talk, not, then, O you farthers and mothers! to your sons of forensic fame—of senatorial halls—of the distinction of professional life, or of the gains and emoluments of commerce. It is not for our class, surely, to furnish more recruits to this hazardous service in which so many of the country have already been lost—lost to any useful purpose of living—themselves miserable from hope deferred that makes the heart sick—or disappointed of the objects of life have become overwhelmed by bankruptcy and ruin. *Give to your Sons the pursuit of Washington*, who gloried in being a Farmer; the field and the council chamber he sought from duty, but his farm at Mount Vernon, where he wisely directed the plough from choice and pleasure.

“Wide—wide may the world feel the power of the plow,

And yield to the sickle, a fulness delighting, May this be our conquest, the earth to subdue, Till all join the song of the harvest inviting,

The sword and the spear
Are only known here

As we plow, or we prune—or we toil void of fear, And the fruit and the flower all smile in their birth All greeting the Farmer the Prince of the Earth.” [C. P. HOLCOMB’S Address at the Maryland State Fair.]

Apple Pies without Apples.—1 cup of sugar, 1 tea spoon-full tartaric acid, 2 cups of water, 1 cup of light bread crummed fine, 1 egg. Season with lemon or any thing that suit the taste. Let the water be warm, when the bread is put in, that it may look soft. Bake with a crust, as you would an apple pie.



The Farmer and Planter.

PENDLETON, S. C.

Vol. V., No. 3. : : : : March, 1854.

Postage.

Persons writing to us and asking an answer by letter must either enclose a post office stamp, or expect to pay full postage on our answer, as we cannot afford to write answers to letters of inquiry and pay the postage on them too. Indeed, we sometimes have to pay on both letters, 5 cents to us and 3 cts. from us. On a single letter, three cents is a small matter, but on the no^o small number we have written and prepaid in the last four years, the amount is not so contemptible. “Many mickles make a muckle.”

We regret that the *Herald* containing the extract from W. Benham’s letters on the application of guano, which we had marked to republish, has been mislaid or destroyed, so that we cannot comply with the request of our friend Laurens to publish it with his communication. The letter accompanying his communication has been laid before “Pry,” who has been so much engaged in using that “barely respectable coulter” of his, which “our great grandfather used” “a hundred years ago,” preparatory to the future surface culture of his crop, that we have not been able to draw him out on *any* subject. We think however, his “dander” is getting up to the fighting pitch and that he will open his battery ere long.

Ashes and Guano.

A friend, in a private letter, cautions us against mixing ashes and guano, and, although we cannot persuade him to write for our paper, he will excuse us, we know, for making a short extract from his letter as it may be of much importance.

to our readers. Speaking of guano, he says: "I directed it to be mixed in leached ashes, a small quantity of each. The boy who mixed them came to me and said there was something the matter with the mixture, for it smelt like hartshorn; I went with him and found it to be a fact. It smelt like hearts horn, and that of a very strong kind.—I then put some guano and ashes in a vial and added water to them. The mixture made as good smelling salts as I would wish to meet with.—From this fact I am satisfied that ashes will not do to mix with it. The guano has a considerable quantity of the muriate of ammonia in it, and by mixing it with ashes the muriate is converted into the carbonate which is very volatile, and it escapes too easily to be of any great benefit to vegetation. Don't take my word for it. Maj., but try it and satisfy yourself about it. I have heard that the use of guano in Virginia, is one cause of the high price of negroes. It has increased their tobacco and wheat crops so considerably that they make enough money to pay their debts without selling their negroes."

Now although we have mixed comparatively dry ashes and the scrapings of a coal bed, with guano, without any bad effects, and have recommended others to mix *leached* ashes with it just before using, yet we should have expected just the result that our correspondent experienced in mixing with *wet* and not thoroughly leached ashes. With a mixture of well leached and nearly dry or unleached and quite dry ashes, with dry guano, we should apprehend no danger to the latter, as under the circumstances we doubt whether any chemical combination would result. That the mixture or application of the two at different times, to any of our crops would result more advantageously, there is in our mind no doubt. Though we have never made the experiment, we think it probable that 200 pounds of guano and 50 pounds of good ashes would make a better crop of cotton, corn, or wheat than would 250 pounds of guano alone, owing to a deficiency of *potash* in the latter, which is essential to the perfection of the crops named, as well as to many others.

Enquiries.

MESSRS. EDITORS.—I take this opportunity of making some enquiry, as I have just commenced farming, believing that I shall be profited by so doing if I can get the necessary instruction.

1. I have about two acres in oak grove, of which I wish to make a pasture for my calves, and horses at leisure times. What kind of grass would be best, and when ought it to be sowed and how managed after sowing, and where can the seed be obtained?

2. I have also a field in which I wish to plant cotton, which has been for years injured greatly by the rust, which makes its appearance early, and often entirely kills the cotton. What will prevent or retard the disease?

Please answer the above as soon as convenient, as time for planting cotton will soon be here.

A SUBSCRIBER.

REMARKS.—We regret the above enquiries did not come to hand in time for our February number, as the writer desires the earliest possible information on the subjects of enquiry.

For a permanent pasture in the oak grove, we would recommend in the preparation of the ground, to grub out all under growth, then to burn off clean all leaves and trash without raking up if possible, so as to leave the ashes regularly distributed over the ground. Then to sow on each acre one bushel of orchard grass, half a bushel of herds grass, five pounds of white clover, and if to be had, one gallon of blue grass seed, all well mixed together and then with a bushel or two of moist leached ashes, and it would be best to let this mixture lie at least one night before sowing it. After the seed are sown, with a sharp iron toothed harrow, pass over the ground in two or three directions so as to scurfy the whole surface effectually, and if the operation can be followed by a roller, so much the better. The ground should at any rate be brushed if not rolled. A few bushels of ashes to each acre, either before or after seeding down, will be found a valuable application. We say nothing about other manures; these may be applied or not according to the natural fertility of the land. The seed should have been sown in February, and nothing allowed to run on the lot for the first year. If the spring is seasonable, sowing any time in March may answer. The seed may probably be obtained from Wm Haines jr. of Augusta, or of the Messrs. Landreths of Charleston. We cannot say positively however, as neither of them advertise with us.

On the subject of the "rust" in cotton, wo

would be pleased to have the opinions and remedies of such of our subscribers as are better posted up than we are. We believe the term "rust" on cotton as great a misnomer as it is when applied to wheat, though almost invariably used by our correspondent. The term rust as applied to the oxide of metallic substances, differs very materially from the peculiar blight, be the cause what it may, that effects the cotton plant. The cause or origin of what is usually termed rust in cotton, even up to our time, is enveloped in mystery. Whilst some believe it to be the work of an insects or animalculæ, others attribute it to a minute parasitic fungus (*Uredo Gossypii*) which is believed to arise originally from the deteriorated state of the soil, not furnishing the necessary and wholesome food to the plant. "The functions of nutrition, secretion, and excretion, are of course disturbed; the vessels become gradually obstructed, and the tissues disorganized, which when assisted by great moisture in the atmosphere is often followed by a development of this fungus." But be the cause what it may, the remedy or preventive is what our correspondent asks for. We have heard an application of lime to the soil recommended, whilst others prescribe a liberal dose of manure of any kind. We would advise G. W. M. to try, if only on a small scale, Guano or Kettlewell's salts, or the two mixed in equal quantities. Who else of our doctors will prescribe?

Humbugs.

MESSRS. EDITORS:—I do wish you had one thousand such writers for your paper as Broomsedge is, he can knock the black out every time he shoots. If men would wait a while and let those that always want to be first, get and try them, there would not be so much humbugging in cotton seed, grass seed, &c. You know there are men that want to be first in every thing; let such men get and experiment first. If they succeed, good, you will hear more of it, if not it will die a natural death.

It will make any man's tongue run glib, at the thought of getting twenty dollars a bushel for grass seed, as Mr. I. expects for the Rescue grass. I think the Rescue grass must be what I have been taught to know as the Fox-tail grass. You know that the

Fox-tail will eat out all other kind of grass, and nothing will eat it. Excuse me for I am not up to writing for a paper.

J. W. L.

REMARKS.—To the first part of J. W. L.'s article, we with all our heart say amen. Would to God we had a thousand such writers as "Broomsedge," and all as willing to act their part in the good cause—the advancement of the Agricultural interest of our country. Yet we do trust and believe that both our friend Broomsedge and G. W. L. have taken up a wrong impression respecting the rescue grass. We cannot yet believe it is a humbug. Since our last we have received a letter from Mr. Iverson, in which, speaking of the grass, he says, "It is the wonder and admiration of all who see it. Being now, (Feb. 16,) 24 inches in height, and as green, tender and nutritious as it is possible for grass to be. It is the great discovery of the day, and what has been sought after for the last 50 years."

As to the rescue and fox tail grass being the same, as seems to be the belief of J. W. L., for the very reason stated by him that "nothing will eat it," in which it differs as much from the "rescue" as does mullein from clover, and for many other reasons we might give, we consider it altogether unnecessary to argue the point.

Although we, the cultivators of the soil, are not unfrequently imposed on by the thousand and one worthless machines, agricultural implements, &c., &c., yet we believe the fear of being bitten by that hydra headed monster "humbug" operates more unfavorably on us in the long run, than do the impositions. Unless the whistle costs too much, we would say "try all things and hold fast to that which is good."

From the Southern Planter.

Experiment in the Tillage of Indian Corn.

It is the practice of many good farmers to break up their land for corn the preceding autumn. I have always found that blue grass turned over in autumn, was not killed by frost, and gave a deal of cross-ploughing and other work in spring, to get the ground in good order for planting, and a great deal more work in after-culture, than when the sod is turned under as short a time as possible before planting: besides this you lose your best pasture, for sheep in particular, from

early frost in autumn, till March; say, on an average, four months in every year.

But whether you break up corn land in spring or autumn, it must be well done to insure a good crop. The depth of ploughing must depend on two things; first the depth of soil, which should always be kept *uppermost*, and secondly, by the ability of the farmer to use a two or three horse plough; but at all hazards, he must subsoil, if he expects to ensure an average crop in dry seasons, and lime, too, if his land is deficient in that fertilizing auxiliary.

Supposing the ground to have been broken as directed, and left, in the rough state, till the time of planting approaches, which is better indicated by *nature* than by the *almanac*, or than any man's notion of a particular day: for if you plant too soon, that is, before the ground is warm enough to sprout the seed quickly, you will assuredly, have much replanting to do, which is sometimes attended with more labor and expense than the first planting. If you plant too late, the culture of your corn will interfere with your clover and grain harvests, and your corn may be injured by early frosts; so that, as in most other acts of man, a middle course is best for planting. In this and like matters, we may profitably follow natures laws. I have found the budding and blossoming of forest trees a good criterion for planting corn and sowing some seeds; for instance. when the leaf of the tulip, or wild poplar tree is the size of half a dollar, Indian corn may be safely planted, and when the chestnut blossoms are fading, buckwheat may be sown with a fair prospect of a good crop.

As short a time as practicable before planting corn, the ground should be rolled and thoroughly harrowed* and then marked off for planting at such distances as may be determined on, according to soil, situation and climate. I plant as close as I can, to allow room for after-culture. The poorer the land the closer I plant, regulating the number of stalks to the acre, by the number left in the hill, rather than by the distance between the hills of checkered, and the rows of stepped or drilled corn. Twelve hours, at least, before I intend to commence planting my corn I dissolve half a pound of copperas in some boiling water, into which

I pour about a gill of tar, add as much more water as will make thirty gallons, then put the seed corn in. Stir it well and allow the corn to soak twelve hours at least. When ready for planting take the corn out and let it drain a while; then roll it in plaster of Paris, and put five or six grains in a hill. It will not be long coming up, nor much troubled by crows and the like, and will seldom require re-planting.

The next process, if the land was not subsoiled when broken up, is, to run a naked, sharp coulter as near the corn, on each side, as a horse can walk, and as deep as he can draw it. This done, as soon as the first planting is large enough to thin, run your two horse heavy harrow over it, following at the same time, with *hand-hoers* to thin and draw a little earth about the remaining plants. Without any other cultivation than this, excepting a handfull of plaster, wood ashes and lime, applied, on the hill, after covering, I have made eleven barrels of corn to the acre, from several acres. As a general rule with me, the culture of Indian corn after it is planted, consists in *surface* culture altogether, taking care never to disturb the sod if any was turned under, and above all, never stir even the surface of corn ground when wet. A good general rule, alike indispensable to preserve the fertility of the land and to insure good crops, is *not to work corn unless the dust will follow the plough*, nor after the roots have extended so far as to be disturbed by the implement.— Strict adherence to these rules for the cultivation of all summer crops, will not only insure fair crops in *any season*, but will redeem that most valuable grain, Indian corn, from the unjust charge so pertinaciously insisted on by all bad farmers, of "*robbing mother earth of her native fertility and rendering her powerless to produce.*"

I have known some farmers of high reputation in Virginia and Maryland, and deservedly so, in all things except the culture of Indian corn. who born and reared in the tide water districts of those States, have their *day of the month* and *day of the week* to commence corn planting, and a fixed number of times of ploughing before "*laying by.*" One of this old school, a most successful renovator of the soil, now no more, who spared neither pains nor expense in his operations, *limed, manured heavily, used guano freely, subsoiled and ploughed extra deep, but would break his corn ground in autumn,*

* If guano or any of the concentrated manures sown by hand, or lime are to be used on the corn land, they should be applied to the *rough, broadcast* before *rolling or harrowing*.

cross plough it in spring, *plant early*, and *coulter* and plough it *four or five times*, and until the tassel made its appearance. Three years ago, after my neighbor had planted his corn, I offered him *ten barrels per acre*, if he would allow me to cultivate it in my own way; he declined, expecting fifteen or eighteen barrels, and went over the corn with one implement or another five times. The growth of the corn was heavy, but the ear was light, the product scarcely ten barrels per acre.

The same season, with not one fourth of the cost in manure and labor, I made on *no better land*, fourteen barrels and a half on several acres, and on one and a half acres over seventeen barrels per acre; and my land came out better than when the corn was planted, while my neighbor's was not a little worsted. My corn was followed next spring by barley, thirty-five bushels per acre. (The barley stubble turned in and wheat sown in October—product twenty-five bushels per acre,) and my land is now well set in clover and timothy.

I am satisfied if my neighbor's corn had not been disturbed after it was thinned, and hand-hoed, he would have made at least fifty per cent. more or fifteen instead of ten barrels per acre.

The past season (1853) in a great drought, when a portion of my corn land became very hard, and I apprehended the worst consequences, the land having been merely coultered before planting, *not thoroughly subsoiled*, I injudiciously set in the single barshare, throwing the mould next the corn, and split the middle with the double shovel. Luckily, this operation was soon stopped by a genial shower, but the mischief had been done to the few rows so treated, for although up to that time the corn in those rows on the best land, had looked well and promised better than on any other part of the field, the product was at least twenty per cent. below the other portion of the cut, which was but twice passed over by the double shovel or cultivator.

Heavy crops of corn are said to be raised on the western prairies by the simple process of ploughing deep and thoroughly inverting the sod, and then, with a sharp instrument, making a hole on the reversed furrow, then dropping and covering the corn and leaving nature to do the rest. If this be true, it is an instructive lesson, and one which I have endeavored to follow, as shown

in my "Essay on the improvement of Worn-out Lands." 'Tis true, we on the Atlantic board have not the prairie of the West, but, by my six-field system which appropriates each field to at least two years successive close grazing, to be followed by corn, we have an artificial prairie, which treated as I have recommended, has never failed, with me, to bring fifty per cent. more corn than can be produced by any other mode of cultivation practiced in the old States.

THO. AP C. JONES.

Fairfax County, Va., October, 1853.

ECONOMY IN WIVES.—A young married woman, who has not had the opportunity of profiting by the advice and example of a good mother, will find some difficulty at first in spending her money to the best advantage; for there is really an art in spending money, (though it is getting rid of it.) Some women will keep house respectably and plentifully on one-third less money than will be required by others, and without meanness or illiberal dealing. But to do this, judgment, forethought and experience are necessary. One woman will be able to tell how much her house keeping costs to a shilling, while another cannot guess within ten. The former has method, rule, regularity, and a certain sum assigned to her; with the latter it is all hap hazard—it comes and it goes, she neither knows how, nor cares. And this is almost sure to be the case if the money is doled out by her husband in a few seillings at a time.

Mince Pie without Meat.—The same preparation as for apple pies. And one hard boiled egg chopped fine, to the pie, with raisins, and such other seasoning, as the taste may dictate for a mince pie.

Slap Jacks.—Scald a quart of Indian meal with a sufficient water to make thin batter. When it is luke warm, stir in half a pint of wheat flour, a gill of yeast, a tea-spoonfull of salt; let it stand over night. If sour in the morning, add a little saleratus, dissolved in warm water. Allow two spoonfulls of batter to a cake, and fry them in butter or nice lard enough to keep them from sticking to the frying pan. Eat them while hot with butter and molasses or sugar.